

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of the claims in the above-captioned patent application.

Listing of Claims:

1. (Currently Amended) An MPEG video decoder for an MPEG bit stream into which a picture is encoded, the MPEG video decoder comprising:

an image decoding section which decodes ~~parameters of each layer and a picture based on an~~ the MPEG bit stream to obtain the picture and parameters of each layer, wherein the parameters include parameters of a sequence layer, the parameters of the sequence layer includes a horizontal size value and a vertical size value of the picture, and the image decoding section ~~including~~ includes an internal buffer for temporarily storing ~~a decoded the~~ the picture and ~~decoded the~~ the parameters;

a frame memory having a plurality of banks and connected to the image decoding section, wherein each of said the banks has an area for storing the ~~decoded~~ picture and the ~~decoded~~ parameters of ~~each layer decoded~~ obtained by said the image decoding section, and stores the ~~decoded~~ picture and the ~~decoded~~ parameters by mutually relating the ~~decoded~~ picture and the ~~decoded~~ parameters as a set, ~~wherein the layer includes a sequence layer which has a horizontal size value and a vertical size value, both expressing sizes of an image, as parameters;~~

a decode control section which controls said the image decoding section;

a display control section connected to the decode control section and to the frame memory, wherein the display control section ~~carrying~~ carries out a display control

~~of a picture to be displayed~~ the picture stored in the frame memory, based on the parameters ~~of each layer related to said picture~~ stored in ~~said~~ the frame memory; and

a status register for storing values indicating whether display of the ~~decoded~~ picture stored in the frame memory has finished, wherein the status register has an arbitration function for arbitrating between the decode control section and the display control section.

2. (Currently Amended) The MPEG video decoder according to claim 1, wherein the status register ~~displays a state of storing pictures of the plurality of banks~~ indicates a data storage state of each bank, and

~~wherein said~~ the decode control section updates ~~said~~ the status register when ~~the decoding of one picture has been completed~~ the picture is obtained, and ~~said~~ the display control section updates ~~said~~ the status register when ~~the display of one picture has been completed~~ the picture is displayed.

3. (Currently Amended) The MPEG video decoder according to claim 1, wherein the internal buffer temporarily stores the ~~decoded~~ picture in a macro-block unit.

4. (Cancelled).

5. (Currently Amended) The MPEG video decoder according to claim 3, wherein a data transfer path for transferring a ~~decoded~~ the picture from ~~said~~ the internal buffer to

said the frame memory also works as a data transfer path for transferring the decoded parameters of each layer between said the internal buffer and said the frame memory.

6. (Currently Amended) The MPEG video decoder according to claim 1, wherein ~~said image decoding section decodes the parameters of a picture to be decoded, and updates parameters of each layer related to a picture that has been decoded immediately before by writing the decoded parameters into these parameters, thereby to generate the parameters of each layer relating to the picture to be decoded~~ the image decoding section decodes the MPEG bit stream to obtain first parameters and overwrites second parameters obtained immediately before with the first parameters.

7. (Currently Amended) The MPEG video decoder according to claim 1, wherein said the decode control section operates asynchronously with a vertical synchronization signal, and said the display control section operates in synchronism with the vertical synchronization signal.

8. (Currently Amended) The MPEG video decoder according to claim 2, wherein ~~if the displayed picture is a reference picture of other picture, then said~~ the display control section does not update said the status register after the completion of the display of that picture when a reference picture of other pictures is displayed.

9. (Currently Amended) An MPEG video decoding method for an MPEG bit stream into which a first picture and a second picture are encoded, the MPEG video decoding method comprising:

reading first parameters of each layer relating to a picture that has been decoded immediately before the first picture, wherein the first parameters include parameters of a sequence layer, and the parameters of the sequence layer includes a horizontal size value and a vertical size value of the first picture;

~~decoding parameters corresponding to a picture to be decoded, and updating the parameters of each layer that have been read at the first stage by using the decoded parameters~~ obtaining second parameters of each layer relating to the second picture, wherein the second parameters include parameters of a sequence layer, and the parameters of the sequence layer includes a horizontal size value and a vertical size value of the second picture;

overwriting the first parameters with the second parameters;

storing the second parameters obtained at the parameter decoding into a frame memory;

~~decoding said picture~~ obtaining the second picture by decoding the MPEG bit stream;

storing the decoded second picture into said the frame memory so as to be combined with the decoded second parameters of each layer corresponding to the decoded picture as a set, by relating the decoded second picture to the decoded second parameters of each layer corresponding to the decoded picture, wherein the

~~layer includes a sequence layer which has a horizontal size value and a vertical size value, both expressing sizes of an image, as parameters;~~

~~controlling display of a picture to be displayed, the second picture based on the second parameters of each layer stored in said the frame memory;~~

~~storing values in a status register, the values indicating whether display of the decoded second picture stored in the frame memory has finished; and~~

~~arbitrating between the decoding obtaining of said the second picture and said the second parameters and the controlling of display.~~

10. (Currently Amended) The MPEG video decoding method according to claim 9, wherein ~~when decoding a first picture, in the parameter reading step at a start of decoding of the MPEG bit stream~~, parameters are read from a memory area that is to store the second parameters of each layer attached to the picture to be decoded.

11. (Previously Presented) The MPEG decoder according to claim 1, wherein the layer includes at least one layer of a GOP layer and a picture layer.

12. (Previously Presented) The MPEG decoding method according to claim 9, wherein the layer includes at least one layer of a GOP layer and a picture layer.